

Appln. No.: 10/010,706  
Amendment Dated March 16, 2005  
Reply to Office Action of December 16, 2004

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**Remarks/Arguments:**

Claims 1-25 are pending in the above-identified application, claims 12-25 are withdrawn from consideration. This response concerns only claims 1-11.

The title was objected to as not being descriptive. A amended title is provided consistent with the suggestion in the Office Action.

Claims 1-11 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. This ground for rejection is overcome by the amendment to claims 1, 3-5 and 11 that replaces the phrase "computing environment" with --computer system-- and that makes it more clear that the connection is between the first computer system and the second computer system. With these amendments, claims 1-11 are no longer subject to rejection under 35 U.S.C. § 112, second paragraph.

Claims 1 and 4-11 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Iliff and Evans. This ground for rejection is overcome by the amendments to claims 1 and 11. In particular, neither Iliff, Evans nor their combination disclose or suggest:

establishing a connection between a first computer system, proximate to the individual, and a data gathering and evaluation system in a second computer system, distinct from the first computer system;

receiving, at the second computer system, a selection from the individual of a particular genetically linked illness from a plurality of genetically linked illnesses;

prompting the individual for family history data specific to the selected illness, receiving the family history data provided by the individual and storing the received family history data into a second database accessible to the second computer system; [and]

analyzing, in the second computer system, the received family history data using the retrieved data relevant to the selected illness to determine the susceptibility of the individual to the selected illness

as required by claim 1, or

establishing a connection between a first computer system, proximate to the individual, and a data gathering and evaluation system in a second computer system, distinct from the first computer system;

receiving, at the second computer system, a selection from the individual of a particular family history;

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retrieving and displaying data relevant to the specific family history and  
retrieving information relevant to a genetic condition associated with the family  
history from a database accessible to the second computer system;

receiving information from the individual which modifies the specific family  
history;

analyzing, in the second computer system, the modified family history  
data to determine the susceptibility of the individual to the genetic condition

as required by amended claim 11.

Iliff discloses an automated telephone system for diagnosing illnesses based on a patient's responses to various questions, as well as the patient's prior medical history. Iliff does not disclose, however, any gathering of family medical histories, nor does it mention finding a susceptibility of the patient to a genetic or hereditary illness. Furthermore, Iliff does not disclose establishing a connection between a first computer system proximate to the individual and a data gathering and evaluation system in a second computer system. Instead, Iliff discloses establishing a connection between a telephone and a computer (See item 110 in Fig. 1 and col. 6, line 59 through col. 7, line 5) or using a local computer that includes the complete system and does not link to another computer system (see col. 4, lines 24-38). The use of a computer system by the individual assists the individual to perform other steps in the method, such as selecting a specific genetically linked illness, receiving and responding to prompts for family history data and receiving the report generated by the data gathering and evaluation system. The use of the second computer system allows more computing power to be applied to the evaluation that could be economically provided by a local computer and also provides security as the genetic information about an individual may be stored on the second computer system while information identifying the individual is stored on the first computer system.

The Evans reference discloses a system that analyzing large database of family histories to identify various patterns of genetic or hereditary illness. (See col. 11, lines 17-65). Neither Iliff nor Evans disclose or suggest: 1) receiving a selection of a particular genetically linked illness, 2) prompting the individual for family history data relevant to the selected illness and storing the relevant family history data into a second database accessible to the second computer system, or 3) analyzing the received family history data using the retrieved data relevant to the selected illness to determine the susceptibility of the individual to the selected illness.

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Neither Iliff nor Evans determine the susceptibility of an individual to a selected illness based on family history data that the individual has entered in response to a prompt, instead Iliff diagnoses an unknown illnesses based on a patient's responses to various questions, as well as the patient's prior medical history (see col. 4, lines 16-23) and Evans determines the "existence of a risk" for individuals that are already in the database and only to those genetic illnesses that have been flagged from data mining the family history database.

Evans describes generating data that may be used by a system in accordance with the subject invention to analyze the entered family history data. Evans concerns data mining of a large database containing genetic information to determine what genetic links correspond to what illnesses and to formulate rules to be applied to the data to determine whether a risk exists. Evans does not, however, allow an individual whose data is not already in the database to enter that data, to enter a specific genetically linked illness and to receive an evaluation. This feature of the subject invention provides it with an advantage over the systems disclosed by Iliff and Evans in that it allows the individual to determine the non-existence of a risk in addition to the existence of any risks. This allows the individual to be reassured concerning their genetic risks without consuming hospital resources. This can represent a significant time savings for genetic counselors who would otherwise need to evaluate the information even though no risk exists.

In addition, as set forth above, neither Iliff, Evans nor their combination discloses or suggests allowing an individual to enter his own family history information. Iliff does not mention the entry of family history information. Indeed, the entry of such information would be difficult over the telephone as described in Iliff's primary embodiment. Evans works with a large family history database to attempt to determine genetic relationships. It does not work with data provided by a specific individual.

Because Iliff does not use family history information and Evans only discloses analyzing a database of family history information to generate rules relating to genetic illnesses, the only motivation to combine Iliff and Evans comes from Applicant's own disclosure. It is well settled that it is improper to use Applicants' disclosure for this purpose.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *The*

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*teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. (emphasis added)*<sup>1</sup>

For the reasons set forth above, claims 1 and 11 are not subject to rejection under 35 U.S.C. § 103(a) as being obvious in view of Iliff and Evans. Claims 4-10 depend from claim 1 and are not subject to rejection under 5 U.S.C. § 103(a) in view of Iliff and Evans for at least the same reasons as claim 1.

Claims 1-11 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Iliff, Evans and Geller et al. Iliff and Evans are described above. In the Office Action it is asserted that "Geller et al. describes a method of genetic testing for susceptibility to cancer....." Applicants respectfully disagree with this assertion. While Geller et al. refer to conventional genetic testing methods, they do not describe any such method. Instead, the Geller et al. article concerns the desirability of providing educational material and counseling to patients at risk to cancer prior to genetic testing due to ethical considerations. (See page 1468, middle column, first full paragraph). Thus, like Iliff and Evans, Geller et al. do not disclose or suggest: 1) receiving a selection of a particular genetically linked illness, 2) prompting the individual for family history data relevant to the selected illness and storing the relevant family history data into a second database accessible to the second computer system, or 3) analyzing the received family history data using the retrieved data relevant to the selected illness to determine the susceptibility of the individual to the selected illness. Thus, Geller et al. do not provide the material that is missing from Iliff and Evans.

Furthermore, as Geller relates only to ethical considerations of providing educational materials to individuals prior to genetic testing, the only suggestion to combine Geller et al. with Iliff and Evans impermissibly comes from Applicants own disclosure. Accordingly, claims 1 and 11 are not subject to rejection under 35 U.S.C. § 103(a) in view of Iliff, Evans and Geller et al. Claims 2-10 depend from claim 1 and are not subject to rejection under 35 U.S.C. § 103(a) in view of Iliff, Evans and Geller et al. for at least the same reasons as claim 1.

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<sup>1</sup> MPEP §706.02(j)

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In view of the foregoing amendments and remarks, Applicants request that the Examiner reconsider and withdraw the objection to the title and the rejection of claims 1-11.

Respectfully submitted,

  
Kenneth N. Nigon, Reg. No. 31,549  
Attorney for Applicants

KNN/tmb


Dated: March 16, 2005

P.O. Box 980  
Valley Forge, PA 19482  
(610) 407-0700

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

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March 16, 2005

  
Tonya M. Berger